MY TWINS KEEPER
DIVERSITY AND PRACTICE CONSIDERATIONS WITH TWIN SIBLINGS

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by
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Janae Diaz

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Division of Social Work
This qualitative study explores the knowledge and perception of six monozygotic (MZ) identical twins. The authors included a detailed analysis of the unique twin experience ranging from childhood through adulthood. Wright, Chang, Jeng, Chen, & Macaluso (2004) found that from 2004–2006, the prevalence of twin deliveries in the United States has remained stable at approximately 32 per 1000 live births, compared with the decreasing prevalence of higher order multiple deliveries. Due to the prevalence of twins in the general population in the United States practice and diversity implications need to be considered. Twins have been misconceived as being the same and this stigma is harming their disposition towards gaining individuality. The focus of this study was on twins that share identical DNA and their quest towards gaining individuality.
DEDICATION

This project we would like to dedicate to our mother Charlene Conley, L.C.S.W. who has always emphasized the importance of individuality. It has been with your guidance and support that we have danced to the beat of our own drum. You have always loved us and cheered us on no matter what. We hold you on the highest pedestal and all that we do, we can attribute to your unwavering love. We admire you for setting the bar high! And for that we are forever grateful. You have been not only an inspiration but a guide along this journey. As usual, your mentorship and support has been unconditional and highly valued. Your bright mind and nonjudgmental spirit has been such a great support. Thank you for letting us both vent to you about the stress of this project and relating to us on a very personal level since you have done this program as well. You have always provided sound responses filled with nothing but wisdom and love. We love you so much mom. And, we are so lucky to have you as our Mother. We love you!
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Chapter 1

The Problem

Introduction

“The brothers shook hands stiffly, when they saw each other for the first time. They then hugged and burst into laughter. ‘I looked into his eyes and saw a reflection of myself . . . I wanted to scream or cry, but all I could do was laugh,’ ” (Jim Springer, New York Times Magazine, December 9, 1979).

As is aware by the researchers of this research study, there is an underlying curiosity people have about twins, a curiosity that relates to whether twins are exactly the same, and the assumption many hold is that they are. Twins are born into a very special and unique situation in which they have an exclusive opportunity to have a friend by their side at all times, but also a situation in which they can struggle or flourish in developing their own individuality. Aside from the fascination people have with twins, they are two different individual people, with two separate hearts, and two separate minds. A generalized perception of twins is that since they look the same they are the same, and that is a false and naive judgment. To think they are the same only robs them of a basic human right to be their own person, and discounts the individual is right to develop and thrive in their ‘own’ skin, unique only to them.

The authors of this Master’s Project are monozygotic twins and share a profound closeness when compared to their other biological sibling. Princeton University, Farlex Inc. (2008) states that monozygotic twins are two twins developed from the same
fertilized ovum (having the same genetic material). Fierro (2008) suggests that from recent data the twin birth rate is 32.2 per 1000 births in the United States. Twins are nature’s clones occurring naturally in the world. Stories throughout history reference twins as two halves of the same whole. The authors are interested in discovering through research the similarities among twins that have been studied in recent years with an emphasis placed on individuality. Studies conducted on twins separated through adoption know that they share harmoniously similar events in their life experiences. Angle and Neimark (1997) state that twins adopted into different families shared common experiences such as falling down stairs at the same age, and marrying and miscarrying in the same year. Identical twins have been known to invent secret languages, and ‘telepathy’ twins seemingly stay connected across thousands of miles.

The author’s profound closeness with each other has existed from embryo to adulthood, a relationship that began prior to birth. Twins, especially identical, achieve a unique, somewhat exclusive self-sufficiency that can be comforting and enriching as well as stifling and restricting. The authors found that being twins has experienced such plights which have been both encouraging and harmful, and they would like to develop a fuller and deeper understanding of the intimate relationship that twins endure. There are some other nonwestern cultures that emphasize a collective existence among twins. Rainwater (1999) poses that native Americans emphasize a collective existence and psychic connection, including the spiritual dimension of twinship in which twins share a special relationship beginning in the womb. Rainwater also states that twins are sacred and comparable and can be referred to as a balanced pair. Twins can often complement
the other twins characteristics, talents and powers, one may be aggressive while the other mild and yielding.

**Rationale**

The circumstances that effect twins and heavily influence their individual disposition are life experiences. While many twins are raised together, may journey through school together, take adventures together, and endure similar life experiences, in which their reactions can be very different towards the same event. Monozygotic identical twins are the primary focus in research for the authors because of the unique condition of sharing identical DNA. It’s proven that monozygotic identical twins share the same biological DNA but why if that is true, do they have their own unique social and psychological fingerprints? Twins can enjoy unique differences from each other regarding personality and individuality and that can be supported through research.

As the literature indicates, identical twins do share the same biological DNA and many of the same life experiences but their reactions to emotions and situations as well as events are individualistic. Psychological differences that are predisposed by emotions and feelings are unique to the individual, not to the twins as a cohort. The authors felt that throughout their lives people commonly identify them as one, by only acknowledging them as a person, rather two individuals.

While twins are essentially a cohort, they are still individuals among the cohort. Cohort by definition according to Merriam-Webster Online Dictionary (2009) is a group of individuals having a statistical factor (as age or class membership) in common in a demographic study. Based on this definition, twins are a cohort experiencing very
similar characteristics throughout their developmental stages. As a result, the authors would like this study project to focus on the individual characteristics of twins and how they came to exist including traits as personality traits evolve into adulthood.

Twins do often share a very special and unique friendship and often do think of each other before thinking of their parents and significant others alike. Literature suggests that twins’, who have lost their twin sibling, feel alone in the world and often experience a void. The authors would like to investigate the profound relationship that twins share in detail in an attempt to explain why when individuality is often achieved that they still think of themselves as a unit, two parts of a whole.

**Theoretical Framework**

Freud (as cited by Segal, Hercshberger, & Arad, 2003) developed a detailed theory on how our thoughts and feelings affect our actions. Freud states that the closeness and familiarity ratings for co-twins exceeded those for non-biological siblings with whom twins were raised. He states further that correlations between perceptions of physical resemblance and social closeness and familiarity were positive and statistically significant. As the psychodynamic theory implies, proponents of this theory believe that the mind, or psyche, is not a passive recipient of information from the world. There are a number of dynamic events going on in the mental life of people at every moment. One of the important ideas in this theory is that many of those events occur on an unconscious level, that is, in a way that we are not, or often cannot be aware of. Twins often are not conscious of the similarities that go on in their everyday lives. The psychodynamic theory
is relevant to the development of twins simply because of the unconscious similarities that occur throughout their lives.

Shriver (2011) describes the emergence of humanism as the belief or power of humans to control their own behaviors and environments in which they live. During the Renaissance and close of the middle ages this idea was thought of as an alternative perspective, and considered by those in power to be a dangerous alternative. This was also threatening to religious folks who thought that one’s behavior should be judged only god and not themselves. In (2006), Robbins states that Humanistic theory, derived from phenomenological thought, remind social workers of the importance of empathy and unconditional positive regard for fostering positive self-concept and a therapeutic relationship. This approach to viewing human behavior solidifies that the human spirit is resilient and able to function in a manner that is best suitable for that person.

Existentialism is a term that belongs to intellectual history. Existentialism was a post World War (WWII) cultural movement that flourished in Europe in the 1940’s and 1950’s. Robbins (2006) found that German philosopher Edmund Husserl, who is generally credited as the founder of phenomenology, also founded existentialism. A current inquiry of existentialism however suggests that the term meaning is much different now than it was back then. The root word of existentialism is “existence” in general but the term means to think about human existence individually and requires a development of new categories of thought. New trends and conceptual repertoire for humans is unique to the individual as well and is always evolving. This theory informs us that the humans are unique based on their own individual existence. Experiences and
thought patterns created from those experiences can never be identical to each individual. While perceptions of experiences can be similar they can never be exactly the same. Even if twins were together at every waking moment and every experience were the same, they still have two different brains and two different hearts therefore illustrating that twins are two different people and not at all the same.

The existentialism theory greatly reflects the unique experience and character in that of an identical twin. Barker (2004) points out that both existential phenomenology and Buddhism call for reflection, or awareness of, our own ways of understanding. As stated by Barker, “we cannot understand people purely on an individual level, as much as psychology has done, or on a social level, as the British school of social constructionism has moved toward doing.” We must understand the whole person individually and within their social context, “as we see a word within a sentence, needing appreciation of both person and context (as with word and sentence) for a full understanding” (Barker, 2004, p.339). An example to validate this idea of thought and to confirm that while twins do share identical DNA and may experience similar life experiences their outcomes can be perceived very differently and that phenomenological understanding of what an event means to a person, may not mean the same to another such as post traumatic stress disorder (PTSD). Barker suggests further that two soldiers in battle together may both witness a traumatic event and only one will experience PTSD.

The ultimate way to identify a twin’s sense of self is to value the process of social interaction and the narrative we each individually have about our past and present. While twins may see themselves within a relationship as a twin and a relationship as an
individual they are always striving to ‘be themselves.’ Twins are inescapably alone as the individual, as we all are, but also have constructed their identity as a pair.
Chapter 2

Review of the Literature

Introduction

When researching the factors that aid twins in gaining their own individuality we must recognize that the ‘factors’ are the independent variable in the study, and the ‘twins working towards individuality’ is the dependent variable. By understanding that research is based on these two important variables we can better understand what occurs naturally. In this case, the twins and the factors which are dependent on the twins can be manipulated by the researcher. The relationship between twins and the factors that either hinder or help influence twins in gaining the essence of their own individuality will be investigated. The authors of this research project will be exploring the complex relationships of twins with an emphasis on identical twins and factors working against gaining individuality.

Prevalence of Twins

Mundy found in 2004, the most recent year for which government statistics are available, that 132,000 twins were born in the United States, more than ever before. And in cities, where women are more likely to wait until they are older and use fertility drugs to conceive, the rate is even higher. The older the mother the more likely she is to ovulate more than one egg at a time, and in vitro fertilization and fertility drugs increase the odds of a multiple birth. Whatever the cause, twin ovulation has become a normalized birth rate in the United States. Wright, Chang, Jeng, Chen, and Macaluso (2004) found that since 1970 the prevalence of multiple births has been increasing. Combinations of
factors including the widespread use of assisted reproductive techniques and advancing
maternal age at conception are associated with this phenomenon. In the United States a
plateau in the prevalence of multiple births has been observed since 2004. From 2004—
2006, the prevalence of twin deliveries in the United States has remained stable at
approximately 32 per 1000 live births, compared with the decreasing prevalence of
higher order multiple deliveries.

Nancy Segal (2005) states that no one knows what causes a fertilized egg, or
zygote, to split within the very first weeks of conception, but this happens naturally in
about every 1 out of 250 births. The result of this happening is two identical twins with
the same genes. In fact, the preferred term is monozygotic, or MZ, because identical
twins are never exactly identical according to Segal. Differences between them can
happen for genetic reasons, environmental reasons, or both—and the differences can
occur before or after birth. If one female twin loses one of her X chromosomes soon after
conception, she will have Turner’s syndrome (x0), whereas her sister might be normal
(xX). And if twins get assigned to different classes at school, they may show differences
in some interests and abilities.

*Significant Cohesion Among Twins*

When examining the closeness of twins, Angle and Neimark (1999) studied the
relationship of twins who were separated at birth and reunited during mid-adulthood.
They found striking similarities between 58 year old twins’ almost indistinguishable life
experiences. Both women grew up in cities outside of London, left school at age 14, fell
down stairs at age 15, weakening their ankles and both eventually went to work for local
government. In addition to their many similar life experiences, their personal preferences were eerily similar as well. They both preferred their coffee cold and were scared of blood and heights. At the age of 58, both came to their reunion wearing cream colored dresses and brown velvet jackets. Angle and Neimark state that the surface similarities are profoundly apparent but their similarities lie even deeper than their appearance.

A twin himself, Smith (2004) identified the major life milestones that only he and his brother were aware of. Smith discusses the profound closeness which twins share from birth; the Smith twins shared very similar childhood experiences. For instance, when they were babies they would rock their cribs back and forth so they could touch each other’s faces, and they had their own language which consisted of noises and grunts that only they could understand. Smith discusses further that as they journeyed through life they made a decision to try to be individuals and be different from each other as much as possible. However, they always wound up sharing similar interests. One of the brothers even took a year off from college because he couldn’t imagine graduating before his brother. Smith’s biggest complaint about being a twin is that people are always looking at their physical similarities even though their mental connection is more impressive.

Bigler (2009) found that many identical twins wear the same clothes and can finish each other's sentences. The LaSalle brothers, participants in Bigler’s research project, catch each other's juggling clubs while doing back flips with one standing on the other's shoulders. And they do it before hundreds of people several times a week. The brothers, Jake and Marty, are among the stars of the Big Apple Circus, and have proved
adept at advancing their careers inside and outside the big top. The LaSalles, who are 24, began developing their talent as children and their extreme closeness and intuition has made them very successful. According to Jake, the act is more about genetics than balance. “Juggling is such a difficult discipline to perfect,” he said. "You have to be so precise. There are very few good team juggling acts out there now. I think everyone has an individual internal rhythm.” The twins feel they have a similar internal rhythm. "With my brother, we're exactly on the same page. When I watch other professional teams perform, it seems much more forced. There's fluency from our luck in being twins.” (Bigler, 2009, p. 17).

Research on twins can be significantly more relevant when the study is actually conducted by a twin, someone whom understands the tribulations and struggles first hand. Klein (2003) specifically addressed the topic of individuality among twins, but also honed in on the ‘ultimate closeness’ that only twin sets share. Klein not only recognized the ultimate closeness she shared with her identical twin sister, but found that as she got older it was exceptionally important to see her twin sister as an individual in order to understand her on a deeper level. Klein’s study was facilitated by interviewing twins at all stages of life. In her research project she quoted herself by stating, “The adult twins I interviewed all enjoyed using their twinship to create confusion, play tricks, or get special attention” (Klein, 2003, p. 15). Perhaps this was a way of payback to those that created a spectacle of them simply for being a twin. Onlookers often ask ridiculous, intrusive and inappropriate questions which may contribute to the nature of ‘twin behavior.’ This power begins in toddlerhood, or as soon as twins can understand that there is more power...
in two than in one, and continues well into adolescence. Klein also found that twins share a profound closeness especially during infancy and early childhood. However, the twin bond loosens as twins develop their own identities. All the twins she spoke with have fond thoughts and feelings about having found a fulltime companion and lifelong friend in their twin sibling. Many struggles of the aspects and experience were encompassed in Klein’s study ranging from first time separation in school, to divorce, to cancer. Both the joys and the struggles are important when addressing the ‘ultimate closeness’ that twins share and this full spectrum of experience is well supported by the authors’ real life twin subject.

Siemon (1980) thinks that while being a twin is not the definitive element in personality development or emotional disturbance, twinship is loaded with psychological hazards that may produce disturbances in establishing a sense of identity. Twins are individuals before they are aware of their special relationship. As a result of simultaneous development and reactions and expectations from others knowledge of the twinship develops, and with it comes a self-image conflict. Siemon also believes that the ultimate relationship that many twins achieve with each other comes at the cost of individual identity. Emotional difficulties occur when twins who have been raised as a unit make a break in adulthood toward psychological differentiation. When the relationship between the twins is more separate and developmentally different, and the twins are treated as individuals from birth, they do not seem to experience the same individuation problems in adulthood. Siemon has proven how overwhelmingly important it is for twins to gain a sense of individuality in childhood, regardless of the closeness of their relationship. The
interplay between the drive toward fusion of identity and the opposing maturational drive toward individuation is the basis for understanding the complex symptoms of adult twins who separate.

For some, identical twins are as a symbolic expression of human longing for reunification. “When a person has the good fortune to encounter his own actual other half, affection and kinship and love inspire in him an emotion which is quite overwhelming, and such a pair practically refuse ever to be separated even for a moment” (Perlman, 2001, p. 89). The author is not discussing romantic love but the phenomenon of twins. Perlman describes the thoughts and philosophies of intellectuals such as Plato, Pausinius, Aristophanes and Freud regarding twins. They all share a similar theme that people are born whole and as they get older they are on a quest to find what they are lacking that will make them whole again. Perlman states that people function on a “compulsion to repeat”, and that means that unconsciously people are trying to discover what made them whole in a past life. With twins there is a unique circumstance; twins don’t have to embark on that journey because they already have what others are searching for. The notion of a good twin and an evil twin, for example, provides a balance in both traits. Perlman addresses this example by saying that if you are born singularly, and you present with good that instinctually you will search for the evil to create balance. Another example the author presented was that if twins are separated and hold the evil traits than those traits will perpetuate, and the same goes for good traits. However, twins together balance traits equally.
Environmental Factors That Influence Differences Among Twins

Segal (2000) studied differences among twins that were reared apart an optimal design for assessing genetic and environmental influence on human physical and behavioral traits. Segal’s study is the first to compare age at menarche between twins reared apart and twins reared together. She states that if identical twins show greater resemblance in age at menarche and a smaller age difference at onset than fraternal twins, this would further support genetic effects on this measure. On the other hand, if reared-apart twins show less similarity in these measures than reared-together twins, this would suggest contributions from shared environmental factors. The present study also provided the first opportunity to assess associations between age at menarche and family rearing factors during childhood in a reared-apart twin sample. At the conclusion of this study, Segal found profound similarities between identical twins reared apart and together. The similarities were due to the fact of twins being genetically similar. Environmental factors didn’t seem to have an extreme impact on the ages of menarche.

Just how identical are identical twins? According to the Economist (2009) identical twins are born from a single fertilized egg, or zygote. Genetically speaking, therefore, they are indeed the same. Such "monozygotic" twins have been a boon for researchers who wish to disentangle the effects of the genes from those of the environment, since they can compare them with non-identical--or "dizygotic" twins. The effects of gestation are neatly set aside in such comparisons, since all co-twins share their mother’s single uterus. However dizygotic twins share no more DNA than ordinary siblings. So if one monozygotic twin, for example, develops an ailment that the other...
escapes, the culprit is probably environmental. On the other hand, when identical twins prove more likely to share a disease than dizygotic twins, the difference is chalked up to their genes. Researchers uncovered a significant amount of variations between twins, possibly enough to explain why apparently heritable diseases that require the coincidence of several genetic risk-factors do not, in practice, always appear in both twins. Schizophrenia, for example, has a family component. But if one twin of a monozygotic pair develops it, there is only a 50% chance that the other will too, rather than the 100% chance that you would see if the sequence of genetic "letters" in the DNA were the only cause.

Barash (2010) discusses the importance of both generalization and individuality in evolutionary science. He distinguishes between true individual differences, and those based on biological and social roles. He notes the need to control for such roles in examinations of individual behavior, and stresses the importance of differences in individual experience which influence all beings, specifically identical twins. Scientific research, he notes, is concerned with general trends rather than individual behavior, but that individuality is nonetheless important in social interactions. He urges biologists, with their general orientation, and psychologists, with their individual orientation, to recognize and study individuality in evolution.

To understand twin bereavement and loss, Woodward (2010) sought her own answers based on the loss of her twin. To find those answer and common ground with others that have experienced the loss of a twin as she had the author conducted a quantitative study which led her to better understand that the loss of a twin has a very
serious impact on the surviving twin. Woodward was looking for a connection between the experience of deep loss and its effect on the formation of sense of self or identity. Throughout the book many of the ‘lone twins’ that had experienced the loss of their twin shared many profoundly similar feelings. Woodward found her subjects by joining the Lone Twin Network in 1989. Throughout her own quest for answers from this particular network, she found many common feelings that she shared throughout the book. The feelings of other twins in her position were somewhat universal in nature and included feelings of loneliness, sadness, insecurity, and invisibility, as well as a feeling that life was unfair, and imagining life without the other seems impossible. Most importantly, Woodward found that in writing about this particular case she did not want to revive press sensationalism but rather bring serious attention to the significance of twin loss and its effect on the surviving twin. There is a considerable need to increase understanding the unique loss of a twin among both family and friends but to society as well. In conclusion, Woodward also brought to light that those who have experienced the loss of a twin, from the womb to adulthood, experience psychological effects.

*Parenting Considerations*

When researching the factors that twins have on parenting, Taubman (2002) studied how raising twin’s causes immense stress compared to raising a singleton. The birth of twins is perceived simultaneously as a double blessing and a stressful event. Given that raising a child is always a challenge, raising twins can be expected to require even greater energy and effort over an extended period of time. Indeed, the overall level of parental stress has been found to be higher among mothers of twins than of singletons.
Taubman found that raising twins causes a major stress on marriages and sometimes on the children. It was found that raising twins does get easier with time and having a good support network eases the strain.

Stewart (2003) asserts that toddler and preschool age twins may actually have an advantage over their singleton peers when it comes to social interaction by affirming that with a same-age playmate in the house, there is plenty of opportunity for socialization. When twins start preschool, they jump right into social situations without hesitation, joining other children's play and organizing play scenarios for other children to join. The other kids seem perplexed by them and prefer to play individually. However, there is research that suggests that young twins have less diversity in friendship than singletons and tend to be more socially withdrawn. In many cases parents assume that twins are built-in playmates for each other and do not feel the need to arrange play dates. Some parents are simply too busy to organize play opportunities; with multiples, it frankly takes extra time and effort and often the invitations aren't reciprocated by other families who are hesitant to host multiple children, which serves an injustice for individuality. Finally, because parents of younger children have more influence over their children's friends, it is never too early to start guiding twins in social relationships. It is convenient and easy to let them play together, but they will benefit from arranged play dates.

Flais (2010) describes the news parents receive when finding out they are pregnant with twins as the newsflash of a lifetime. It was found that parents, especially pregnant mothers, experience a whole gamut of mixed emotions ranging from excitement to feeling of potential looming failure. While studies are often conducted on the actual
processes and feelings of twins, it is often a foresight of what the parents of twins have experienced. The feelings of excitement that parents of twins feel can quickly transform into fear in mere moments and it is important to devise coping strategies very early on. Flais asserts that the characteristics of good parenting are universal, whether you have 1 or 2 babies. If you can provide love, food, and safety to your babies, you can successfully parent twins. It was also pointed out that to promote individuality among twins, those involved in identical twins lives should take plenty of pictures of the twins alone as well as together, this will be acknowledged later in life and they will show gratitude for treating them as individuals. For the individuality and uniqueness of the twins it is detrimental to avoid making too many comparisons. As competitiveness is a trait twins embark upon early on, it can be exacerbated by the family without them even acknowledging it.

Variables That Influence the Fascination of Twins

Bennett (2009) suggests that some identical twins choose to represent themselves as twins rather than solely as individuals, or as siblings who are also twins, in order to test out the limits of individuality. Bridget Bennett is evaluating the photography of Mary Ellen Mark's who photographs of twins, both fraternal and identical, and triplets but overwhelmingly identical twins. Mary Ellen Mark is fascinated by the similarities in twins and she usually photographs them standing together, dressed in precisely the same way, in carefully constructed poses. This recreates the carnivalesque, performative aspect of Twins Day, held each year in Twinsburg, Ohio, in which the fact of being a twin is the focus.
Hass (2009) found that whatever the cause of twinning, once it begins, mysterious and unsettling events can occur. Some twins disappear or even merge together into one person. Ultrasound equipment has detected twin pregnancies that later turn into a single birth, as one of the twins is absorbed by the other twin. Only one in 80% of twin conceptions make it to term as two living people. The author also found that the singleton that survives the pregnancy is not infinitely affected by the loss of their twin due to never knowing they were a twin. This does not negatively affect the singletons identity which is often said to be a common occurrence among twins that lose their twin sibling.

Hogan (1999) addresses the universal fascination of twins across cultures and time. Hogan also states that in ancient myths as well as in contemporary science, twins remain something of a mystery and pose an array of fascinating metaphysical, psychological, and ontological questions. The literature attends to the allure of twins on television ranging to the powerful psychic bonds that twins feel after the death or separation of a twin. Hogan found that Native American's emphasize a collective existence and psychic connection which includes the spiritual dimension of twinship. For example it is stated that the Navajo creation story, develops around numerous sets of twins and among the Lakota Tribe twins are sacred, sharing a special relationship beginning in the womb. “Twins sometimes switch roles, or, if one is absent, the other assumes all or part of his siblings identity” (Hogan, 1999). With that Hogan explores further that one thing is reasonably certain that where the sacred twins occur, there lies magic.
The connection between twins can be surprising for those that are not part of the twinship. Segal (1999) describes the special poignancy that affects us all, (e.g. family members and how family connections are a complex puzzle) and found when studying siblings reared apart by adoptive families that after being reunited they felt that the sibling relationship was similar to as close as someone I met for the first time and as familiar as a casual friend. And when studying the relationship between twins that have been reared apart by adoptive families most often rated the closeness as more familiar than a best friend and more similar than a best friend. The findings of the research are compelling in that of twins reared apart. There are some twins who initiated a search for biological relatives and did so with the intention of locating mothers and fathers, but after learning of their twinship, refocused their energies on finding their twin. Cultural and societal norms lead people to believe in the importance of family and perhaps the biological factors increase the importance of these relationships. “A reared apart identical twin is met with an unmistakable gleam in the eye, a smile and an excited yes!” (Segal, 1999). In addition to the profound closeness that even twins reared apart share is the underlying curiosity and, at times, jealousy that other siblings of the twinship feel. Society, family and siblings included, are fascinated by the indescribable closeness and bond that twins share, telepathy, and feeling what the other twin is feeling.

Differences in Twins

Monozygotic (MZ) twins have identical DNA. However, research has been facilitated after an interesting situation occurred in Portugal. “A woman had intercourse with MZ twin brothers on the same day and became pregnant” (Segal, 2004, p. 675). The
woman is now the mother of a young girl, and she went to court to find out the identity of the father only to find that the paternity test was deemed inconclusive because of the brothers’ identical DNA. Based the results, Nancy Segal was approached to conduct a research study to find whether there was a way to more conclusively identify a difference in paternity tests conducted on identical twins. Segal found that researcher Raykan et al. (2002) has shown that in inbred mice some alleles vary in their expressivity, despite their lack of heterogeneity. The variable is said to cause epigenetic processes which turn genes on and off due to changes in the environment. Raykan et al. suggests that these processes occur during embryogenesis and that such alleles should be called metastable epialleles. To clarify these epialleles are alleles that can occur in more than one state, and while metastable epialleles are alleles that cannot change more than one state. “They point out that such effects are hard to detect unless genetic and environmental differences between organisms are small and at the human level, this would only be possible with MZ twins” (Segal, 2004, p. 675). The findings state that if the paternity tests were to be performed again with this new knowledge available then the Portuguese woman would be able to find out which twin was the father of her young daughter.

Schur, Kleinhang, Goldberg, Buchwal, Polivy, et al. (2012) studied whether self-reported intent to exert cognitive control over eating was associated with differences in brain response to food cues, independent of genetic background. Subjects were ten pairs of female identical twins in which one twin was a restrained eater and the co-twin was unrestrained, as classified by the Herman and Polivy Restraint Scale. Before and after ingestion of a milkshake, functional magnetic resonance imaging was used to measure
brain response to photographs of objects, “fattening” food, and “non-fattening” food. Schur et al. found that at baseline, restrained eaters had greater activation in the left amygdala and the right thalamus in response to fattening food cues than did their unrestrained co-twins. It has been suggested that certain foods can challenge cognitive control which can trigger overeating in the restrained eater. When restrained eaters drank a milkshake, activation in response to fattening food photographs decreased across multiple brain areas, whereas activation induced by non-fattening food photographs increased. As compared to their unrestrained co-twins, restrained eaters who drank a milkshake had greater decreases in activation by fattening food images in the left amygdala and occipital lobe, and greater increases in activation by non-fattening food images in the medial orbitofrontal cortex. Because of the discordant monozygotic twin study design, the findings provide a rigorous level of support for the hypothesis that adopting an intention to restrain eating alters brain response to food cues.

Segal (1999) has intently studied both identical and fraternal twins for many years. Segal’s fascination with twins is personal; she is a fraternal twin herself. Segal is also a psychology professor with a strong interest in human behavior, and has written countless books and articles and has dedicated a large part of her career to the study of twins. She studied the differences between identical twins firsthand through direct observation and noted differences such as, “Mohammed and Ali are virtually identical in height, but Mohammed is left handed and Ali is right handed. Mohammed weighs 155 pounds, while Ali weighs 145 pounds and they point out that Mohammed, who weighed six and one-half pounds at birth (one-half pound more than Ali), has been the heavier
twin since infancy” (Segal, 1999, p. 22). MZ twins often share subtle variations but knowing that identical twins are not truly identical sends the important message that early life events influence the unfolding of genetically based developmental plans. These different environmental life events may occur before birth, at birth, after birth or may involve all three.

Researchers recognize four varieties of identical twins each depending on when the fertilized egg divides. The splitting occurs between four to seven days after fertilization. A significant difference among identical twins right from the start are the late-splitting eggs which split at day seven. “Late splitting has been a common explanation of twin partner reversals in some physical traits. Again, embryolical complexities prevent firm conclusions regarding events causing mirror-imaging effects in identical twins” (Segal, 1999). Other differences among twins include occasionally reversed effects in the direction of hair swirls and dental patterns. These patterns are actually identical but present on opposite sides of the body. Some twins preferred writing hand is their left hand, while the others twin’s preferred writing hand is their right. “Approximately 25% of identical twins show some form of mirror image reversal” (Segal, 1999, p. 24). Recent studies indicate that twins show little resemblance in the shape of the “planum temporale, a brain structure possibly associated with language” (Segal, 1999, p. 26). Another feature that has been observed among opposite handed identical twins are that while brain patterns based on verbal and non-verbal tasks may present as similar, motor activities such as problem solving and finger tapping remain a mystery and present differently. The nervous system among twins also presents as
significantly different, and guarantees individuality in neural connections. Many studies have compared opposite handed twins. Segal (1999) compared IQ scores among opposite handed twins and found that the lighter in weight left handed twins scored lower than all the other twins, this is not always the case, but can present when there are prenatal difficulties. Segal (1999) also suggests that it’s possible that these twins resulted from unequal splitting of the cells, and may have developed from fewer cells than their right handed co-twin.

**Twins and Addiction**

Identical twins are prized among medical researchers, psychologists, and other scientists who seek to study the effects of genetics and environment on human development. Identical twins, also known as monozygotic twins (MZ), share 100 percent of their genes. This effectively eliminates the genetic variable. Horwitz (2003) stated that any differences that come up between the two twins, then, must be due to environmental factors. Identical twins are further differentiated into two broad groups. Most identical twins are raised together in the same household. This means that the twins grow up in an environment in which many factors, such as nutrition, access to education and health care, are nearly the same. At least until these twins leave the home, many of the environmental variables are also eliminated. This means that while they are young, any differences that arise between identical twins raised together are due to the unique experiences of the individuals. The second group, which is rarer still, includes identical twins raised separately. These twins are sometimes separated at birth and given up for adoption to different families. Sometimes the parent’s divorce and the children are raised
separately. Twins raised in this way can be compared against each other to gain a better understanding of how broader environmental factors shape outcomes in human development. One study comparing alcohol and addiction in identical (MZ) and non-identical (dizygotic) twin pairs found that genetics definitely play an important role in addiction. The study found that when one person in a pair of identical twins is addicted to alcohol, there is a high probability that the other will also be addicted to alcohol. For non-identical twins there is also a correlation in alcoholism, but it is not as strong as between identical twins.

Baker, Mitchell, Neale, and Kendler (2010) studied the prevalence of Substance Use Disorders (SUD), Bulimia Nervosa (BN), and Anorexia Nervosa (AN) among monozygotic identical twins. Participants were from the Virginia Adult Twin Study of Psychiatric and Substance Use Disorders (VATSPSUD). The background of this study is a population-based longitudinal study of adult Caucasian twins sampled from the Virginia Twin Registry of female-female twin pairs who were born between 1934 and 1968. The study included 1,206 monozygotic/identical twins. The research showed a significant association between eating disorders (ED) and SUD. The objective of the study was to examine the prevalence, chronology, and possibility of shared familial risk between SUD and ED symptomology. Baker and colleagues state that there were no significant differences between SUD prevalence in women with AN and BN. Women with BN reported BN preceded SUD development while the reverse was true for AN. Twin analyses showed possible familial overlap between BN symptomology and all SUD examined. Twins are used often in studies to examine familial risk factors.
Discordance of Mental Disorders among Identical Twins

Baldessarini and Hennen (2004) conducted a study to determine genetic factors and risk for suicide and how it may have heritable contributions. Evidence supporting this study included more than 20 controlled families. Contributions of genetic instead of environmental factors are indicated by a higher average concordance for suicidal behavior among monozygotic (MZ) or identical twins compared to dizygotic (DZ) or fraternal twins to relatives of other suicidal subjects in at least seven studies. Baldessarini and Hessen (2004) required concordance data in identical versus fraternal twins in which the twins had a shared postnatal environment. The findings for the study were very high among MZ twins in that the overall concordance for suicides or attempts was 401/1,704 MZ twins versus 2/1,486 of DZ twins. “These concordance rates yield an extraordinarily high pooled relative risk that appears to be 175 times higher among identical twins. However, the observed incidence of suicidal behavior among fraternal co-twins in these studies was extraordinarily low, with only 2 suicides among 1,486 fraternal twin pairs” (Baldessarini & Hessen, 2004). In summary this study found that the observed risk ratio for suicide is 66 times greater for identical twins when compared to fraternal twins and first degree family members.

Ahlert-Smith (2007) reviewed a book called Divided Minds: Twin Sisters and Their Journey Through Schizophrenia, by Pamela Spiro Wagner and Carolyn S. Spiro. The book is a memoir written first hand by a set of identical twins in which one suffers from psychiatric symptoms of schizophrenia while the other has endured the illnesses effects on her twin sister and their relationship. Ahlert-Smith (2007) identified key points
in the lives of these twins and summarized the struggles in both twins’ perspectives. “Carolyn the more average twin who exceeds expectations to become a psychiatrist and a dancer” and “Pamela, the talented and magnetic twin who has her first psychotic episode at 11” are twin sisters who have lived the experience of not only the struggles for individuality but also the struggles of having a shared identity and the looming comparisons others make. “Book one hurtles us back to 1958 and the twins’ sixth birthday, when they compete to wear the blue paper birthday crown. Pamela will long resent Carolyn for stealing her rightful crown. But Carolyn will never feel as special as Pamela, even in the throes of the latter’s of schizophrenia” (Ahlert-Smith, 2007). Pamela, the twin with the diagnoses of schizophrenia is recognized by a teacher in 1963 as an outstanding writer, however her themes demonstrate darkness. “Soon comes President Kennedy’s assassination, or what she calls the last Friday of her childhood” (Ahlert-Smith, 2007, p. 121). The assassination triggered her first psychotic episode, replete with paranoia, racing thoughts, loose associations, and auditory hallucinations. Once Pamela reached junior high her self care declined. Carolyn scolds her: “Look…people don’t know we’re twins. If you’re filthy, they’ll think you’re me” (Spiro & Spiro-Wagner, 2005, p. 55). The schizophrenia acted as a wedge in the twin’s relationship but did not hinder Pamela from graduating from Brown University as magna cum laude and pursuing a career as an award winning writer award-winning writer. Both twins are bright. Carolyn a Harvard trained psychiatrist writes candidly about her life as the twin sister of a mentally ill twin sister, about the countless emergency trips to rescue, the pride she gained from her father after Pamela’s onset, and of hating Pamela. Carolyn writes, “Must
I always be the one to know, to help, to suffer, to bear?...I am trapped between wanting freedom and wanting you” (Spiro & Spiro-Wagner, 2005, p. 310). Carolyn also writes of being envious of Pamela. She envies Pamela’s ability to creatively write, her status as the smarter one, a brilliant and better version of herself regardless of the schizophrenia. However, the fact that these twins can candidly write a book together addressing the schizophrenia, as well as the turbulence and resiliency of their relationship, proves that the twin connection is profound.

Kuratomi, Iwamoto, Bundo, et al. (2008) conducted a study on the DNA methylation differences between monozygotic twins discordant for bipolar disorder. In twin studies of bipolar disorder, the concordance rate in monozygotic twins (>14%) is much higher than in dizygotic twins (>14%). The focus of this study was on a pair of monozygotic twins discordant for bipolar disorder that had previously been studied for gene expression differences and found that there were differences in upstream and downstream genes (XBP1 & HSPA5). These expressive differences in genes might be caused by differential DNA methylation status and expression level of other genes such as the upstream XBP1 gene. “In this study, we searched for DNA methylation differences between a pair of monozygotic twins discordant for bipolar disorder, and identified four genes with altered DNA methylation status between the twins” (Kuratomi, 2008). This recent study shows that there are DNA methylation differences in lymphocytes between healthy monozygotic twins, and the differences increase with aging. This study also revealed that unmethylated allele PPIEL was frequently seen in the twin with the disorder when compared to the healthy twin. The results however cannot confirm if the allele
PPIEL is the cause for bipolar disorder or if its secondary or compensatory changes are induced by the disorder. In summary, among monozygotic twins discordant for bipolar disorder there is evidence to support DNA methylation differences that are not identically found in each twin.

A photograph of the identical twin baby girls, dressed in dainty frocks, is compelling. It becomes even more so when the viewer learns that one of the twins developed schizophrenia at age 20. The other twin is well. Why would one twin become schizophrenic when both were raised under identical circumstances? Are some people genetically destined to become schizophrenic? Seeking those answers, Lewis, Chitkara, and Reveley (1991) recruited more than 34 pairs of identical twins in which one suffered from schizophrenia or manic-depressive disorder and the other did not. In a landmark study that began in 1987, the twins were evaluated and tested in Washington, D.C., in a comprehensive effort to uncover the biological roots of mental illness. The researchers concluded that while schizophrenia and manic-depressive disorder have genetic components, they are most likely triggered by an outside biological force, such as a virus, either in utero or in infancy. Tests showed a profound change in both the structure and the function of the brains in twins with schizophrenia—changes that did not occur in the healthy identical twins. The researchers believe the changes in brain structure, as measured by magnetic resonance imaging (MRI), are an integral part of the schizophrenia disease process. The study also found that obstetrical complications in pregnancy and birth appeared to be contributing factors in at least 30 percent of the twins with schizophrenia. The researchers established that the disease may begin very early in life
although the symptoms do not usually appear until young adulthood. They also
determined that schizophrenia, often called madness of the mind—does not change many
of an individual’s normal personality traits.

*Recommended Interventions When Working With Twins*

Weinstein and Weinstein (1982) studied Karl Mannheim, a sociologist who
researched individuality starting in the 1930’s, and the effects of gaining individuality vs.
social conforming and found it to be much more valuable and necessary for society to
individualize and provided examples. “Once the individual has been released in society
the only moral basis for solidarity is voluntary commitment, which Mannheim did not
believe is a sufficient guarantor of society’s survival because it does not provide
unconditional backing for social norms” (Weinstein and Weinstein, 1982). In his late
work Mannheim feared that individuality would be effaced by technical manipulation of
the mind, though he maintained the ideal that society should create strong individuals.
The insight this research offers is crucial when working with twins. Social norms and
perceptions of twins hinder the outcome of individuality for them by comparison and
confusion therefore hindering the individuality component people discover during
childhood into adulthood. Individuated personalities emerge from complex social
interactions which also fosters the ability to gain individuality. It is especially important
for people to understand that social processes occur for an individual that can be
experienced quite differently for another. With identical twins, there are two separate
people, and while they do share identical DNA they do react and experience life through
separate lenses which is vital for establishing identity and individuality. This process
should be prioritized and nurtured by all those who come in contact with identical twins, by not doing so can be damaging. As found in the term existential distance, which is the ability to identify “the distance between the I and the other purely as a person, regardless of conventionalized social relationships. Existential distance also opens up for the individual by allowing the individual to rely less on others which in turn makes “it possible to ‘love’ or ‘hate’ the other as a person, therefore reinforcing the importance of individuality which in turn can challenge codependency and identity confusion.

Multiple births are becoming increasingly prevalent due to the use of fertility drugs and women choosing to wait until later life to conceive. With the growth in the twin population, little research has been done to investigate the effects on the grief process when one twin dies. Counselors and practitioners must understand the unique experience of twins to formulate interventions to counsel the surviving twin and parents. In this article, Withrow & Schwiebert (2005) provided strategies for counseling this unique population. “Although only approximately 3% of the total general population are twins, those who are twins have imbued twin relationships with expectations of extreme closeness, magical understanding, private languages, individual’s fantasies of having another self” (Withrow and Schwiebert, p. 21). All of these attributes must be respected and considered when working with twins both identical and fraternal. Counselors working with surviving twins and their families need to be familiar with some of the unique issues surrounding twins. Although the normal grief issues may be expected, other factors must also be considered when working with this population. Also the age at the time of the loss, bonding pattern, family coping strategies, and other factors need to be
taken into account when developing effective treatment strategies for this often
overlooked population. It is crucial to realize that this article is only a beginning in the
discussion of the needs of survivors of twin loss, and additional research needs to be done
to investigate the growing population of individuals affected by twin loss.

**Summary**

Mundy found in 2004, the most recent year for which government statistics are
available, that 132,000 twins were born in the United States, more than ever before.
Wright, *et al.* (2004) found that since 1970 the prevalence of multiple births has been
increasing. Combinations of factors including the widespread use of assisted reproductive
techniques in advancing maternal age at conception are associated with this phenomenon.
Segal (2005) states that no one knows what causes a fertilized egg, or zygote, to split
within the first weeks of conception but this happens naturally in about every one out of
250 births. Through the gathering of literature it was found in that in twins reared apart
there were many similar life experiences, their personal preferences were eerily similar.
Research on twins can be significantly more relevant when the study is actually being
conducted by a twin, someone whom understands the tribulations and struggles first
hand.

Siemon (1980) thinks that while being a twin is not the definitive element in
personality development or emotional disturbance, twinship is loaded with psychological
hazards that may produce disturbances in establishing a sense of identity. Twins are
individuals before they are aware of their special relationships. Emotional difficulties
occur when twins who have been raised as a unit make a break into adulthood towards
psychological differentiation. Taubman (2002) found that raising twins causes a major stress on marriages and sometimes on the other children in the family. The overall level of parental stress has been found to be higher among twins than in singletons. The connection between twins can be surprising for those that are not part of the twinship. Twins are often used in research to identify the genetic variations in addiction, mental illness, eating habits, etc. because of their identical DNA. During the quest of gathering literature on the subject of MZ identical twins it was found that not much research exists regarding the topic of social work implications and interventions.
Chapter 3
Methods

Introduction

To reiterate, this qualitative study of monozygotic (MZ) identical twins explores the profound closeness of the twin relationship, the differences in mental, physical and emotional well being, and environmental aspects that affect the outcome for individuality. The purpose of this chapter is to describe the qualitative research method these researchers used in conducting research on monozygotic identical twins and their knowledge, personal experience, attitudes, and relationships with one another.

Research Design

This research project utilized the exploratory-qualitative design. “An exploratory research design is a type of research design that allows us to use our powers of observation, inquiry, and assessment to form tentative theories about what we are seeing and experiencing” (Faulkner & Faulkner, p. 9, 2009). The method used was qualitative-in-depth exploratory case interviews where six MZ identical twins were asked twenty five questions; three focusing on demographic information, twelve focusing on childhood experience and personal interpretation, three focusing on parental and individual relationships, six questions focusing on adulthood and lastly recommendations for social work interventions regarding twins and their families. With the exception of the initial three questions focusing on demographic information, the questions were open-ended in nature to promote conversation. The researchers utilized open-ended questions in order to compare and analyze the responses and to identify emerging themes that might exist
regarding the knowledge and perceptions of the participants relative to the discussion of twins gaining individuality. An assumption people make about twins is that they are exactly the same sharing identical DNA and this study would like to explore the differences supported by scholarly evidence and interview twins based on a series of questions fabricated around the focus of individuality. “The greatest pitfall in the exploratory study involves premature conclusions: the findings may seem convincing enough but are inappropriate for release as conclusion” (Faulkner & Faulkner, p. 89). Additionally, when the researchers conduct the study they will take into consideration that questions early on in the interview may reveal information towards a conclusion however they will not draw conclusions until the interview is completed.

Measurement Instruments

The researchers developed a set of interview questions to be used in this research study that were reviewed and approved by their project advisor Dr. Serge Lee. The questionnaire was designed to focus on all aspects regarding a twin’s upbringing, childhood, adulthood, competitiveness, the strength of the twin relationship, the twin’s perceptions of being a twin, and how the twins were treated by their parents. The measure instrument consisted of a total of twenty five questions. The first three questions were demographic information on the sample population. Demographic questions were asked regarding the participants’ age, ethnic background and gender. The final twenty two questions were designed to gather information from the participants regarding their experience and personal knowledge of growing up as a twin. These questions were open-ended and designed to promote conversation and provide insight into how knowledgeable
the participants were on the project topics and to gain their personal perspectives. In addition to identifying these questions as important in a twin’s life, the researchers used their personal experiences and knowledge of growing up as twins to identify important aspects to include when revealing aspects of individuality.

Once the researchers formulated their questionnaire they submitted it to their project advisor for approval. The questionnaire was returned with minor corrections and recommendations to better hone in on the research aspects of identifying individuality and twin experience. The researchers made the final revisions and resubmitted again for final approval. Dr. Serge Lee accepted the questionnaire and the researchers then moved onto the next step in their study.

**Data Collection Procedures**

The researchers collected qualitative data from three sets of MZ identical twins. The three sets of twins voluntary agreed to participate in the research study and provided a letter of interest stating their interest. The researchers personally knew each set of twins prior to this study. The first set of twins who volunteered to be part of this study the researchers have known for twenty years, they attended elementary school through high school together and lived just down the street from each other growing up. The second set of twins that volunteered to be part of this study is the mother and aunt of a very close friend the researchers have known for over fifteen years. And lastly, the third set of twins who agreed to be part of the study is mutual friends of a family member of one of the researchers. Each participant was personally approached and introduced to the research
project and purpose. Each participant was very interested and willing to participate once the idea was introduced.

When the researchers obtained initial interest from the participants they personally contacted each twin individually to set up interviews. To protect anonymity and confidentiality the researchers planned to meet each participant in their local county library. Each participant agreed and days and times were obtained at their convenience within the time frame the researchers planned to conduct the study. Each interview took approximately two hours to complete. The researchers directed the interviews to keep the participants on topic with the allotted time in regards to the information solicited. The researchers recorded the interviews with an audio voice recorder in addition to taking thorough notes of body language, emotions revealed, and common themes. During the in-depth interviews, the researchers used Olympus Digital voice Recorder to record the entire interview for the ease of asking questions and interruptions of not taking notes in front of the interviewees. The recorded information were later transcribed for further statistical analysis. To protect confidentiality of each participant, names were not used during the recording of the interview. Each interview was recorded on an individual tape and after the completion of the interview the notes and tape were placed into a large manila envelope being used to store the tapes, which was then placed in a locked drawer of the one of the researchers at her home. Each interview was reviewed by researchers who listened to the tapes twice; the first without transcribing any information, and then again allowing the researchers to transcribe the key points of the interview. With the
completion of this process all information was placed in a manila folder that was kept in a locked drawer at one of the researchers homes.

**Human Subjects Protection**

The researchers filled out the application for Human Subjects Protection after the planning of their qualitative exploratory case study was finalized with participants in mind. With Dr. Serge Lee’s guidance the researchers were able to formulate responses to each of the relevant areas that needed to be addressed required by the California State University’s Institution Review Board (IRB). Additionally the researchers accounted for confidentially aspects of the process of data collection and planned strategic methods in securing anonymity. Once the application was completed the researchers submitted it to Dr. Lee for his final reviews and approval.

Once their Project advisor approved and signed off on the application, the “Request for Review by the Sacramento State Committee for the Protection of Human Subjects” was formally submitted to the Division of Social Work’s Committee for the Protection of Human Subjects and it was with the specification that the research project contains no risk. Through the informed consent document potential interviewees were informed about the study and its voluntary nature. All interviews were conducted at a public library in the vicinity of each of the participants’ home. Informed consent forms and all data were secured at the home of one of the researchers. Upon completion of the project all consent forms, audio recordings and data will be destroyed. Once the researchers submitted their application and all required documents for approval in the month of October 2011, they waited for a response. The application was approved on
October 21, 2011 with no recommended revisions and the researchers were notified by email from the Division of Social Work. The approval number for the human subjects’ application is: 11-12-028.

**Qualitative Analysis**

When the researchers completed the interviews they attempted to analyze the data. They did so by conducting a qualitative analysis. Before the transcription began the researchers listed each individual question from the interviews on separate sheets of paper. Once this was completed the researchers listed each written observation they obtained under each related question. Additionally the researchers listened to the audio interviews as well to further identify emerging themes from each interview completed. This process was completed for all twenty five questions. Once this process was completed with a summary of responses it was then possible to identify common emerging themes. Recurring themes were discovered by reviewing the responses and finding similarities of the responses given during the course of the interviews. After gaining the participants permission to continue the audio recorder was turned on and the interview proceeded.

To protect confidentially of the participants names were not recorded during the interviews. Each interview was recorded and stored in its own individual folder for safe keeping in a locked drawer at the home of one of the researchers. Each interview was reviewed once by each researcher to ensure that thorough information was obtained. With the completion of this process the information was kept in a manila folder and stored
securely in a locked drawer. After final completion of transcription and analysis all information was properly destroyed via shredding and deleting audio.

**Research Limitations**

For the purpose of this study, the researchers conducted a “no risk” study which limited the emergence of information from twins under the age of eighteen. During the quest for a thorough study of individuality among identical twins many questions were formulated that revealed similar responses and themes. The researchers took this into consideration and remained mindful of the contents of the interview. A pitfall that could emerge from this study is that the researchers are monozygotic identical twins as well, and share similar experiences and tribulations to the participants they interviewed, which can lead to subjective rather than objective observations. Another pitfall is that the sample size for the research is extremely small; as a result, findings may not truly reflect the experience of MZ twins in the general population.
Chapter 4

Findings

Introduction

The researchers interviewed three sets of monozygotic identical twins. The focus of the interview was to pinpoint the quest for twins in ascertaining individuality in the course of their life experiences. Different aspects included in the questionnaire addressed demographics, childhood experiences, parental influence, the twin’s perception of adulthood, and finally suggested interventions to consider when social workers work with twins. Five individual semi-structured interviews were conducted. One set of twins requested that the authors interview them together while the others requested to be interviewed individually. In respecting the different needs of the twin’s individual privacy we accommodated them with what they felt was comfortable and safe. The end result was a collection of qualitative responses from the participants. Each participant was asked twenty-five questions; three focusing on demographic information, twelve focusing on childhood experiences, three focusing on the parental dynamic, seven focusing on their adulthood experiences, and lastly one to gather the twins’ recommendations for twins within the context of social work interventions. Participants were asked to describe their personal perception and tribulations of growing up aside their twin sibling. Specific questions ranged from how was their childhood growing up as a twin to did they ever feel competitive towards their twin socially or academically to how their relationship with other siblings was (if there were any) in the house. The objective was to obtain the twins’ individual perception and thoughts of growing up as a
twin. This chapter delineates the findings that were collected from the interviews with the six participants. The authors will first present the demographic information of the sample population, followed by the analysis of the qualitative responses.

**Demographics**

The information was gathered from six MZ twins. All six twins were female ranging from ages twenty seven to fifty four years of age. The specific ages of each set were: twenty seven, thirty six, and fifty four. Within the demographic information collected the only areas addressed were age, ethnic background and gender. With reference ethnic backgrounds the twins identified as Caucasian, Hispanic (Costa Rican) and lastly Portuguese and Mexican.

**Childhood Experiences**

Within the topics addressed in the questionnaire, the authors elaborated most on childhood as it is the stage of one’s life where personality and individuality are formulated. Among the responses the twins shared both good and bad aspects of being a twin. A common theme was that the twins were rarely recognized as individuals. It wasn’t so much as to how the twins felt towards one another but what others conveyed toward their twin-ship. The competitive factors of social and physical differences were always pointed out by others outside the twin-ship. This can be evidenced by this response, “my sister was skinnier and I took a lot of torment for that. Kids would tease me and do the chubby face at me.” That same twin also responded, “my sister was social and I was more of an introvert.” Not to attribute the harassment this twin endured to result in her being an introvert but it is certainly something to consider. Within the
context of personality traits encompassed in being different one twin stated, “I was more outgoing and attracted more friends or the more outgoing friends.” One response was, “I had resentment towards being a twin. I had many cousins who did not know my name.” Another was, “I was just twinney. They would line us up to see who was prettier, skinnier, smarter, etc. I hated it.” To highlight the struggle towards achieving individuality one of the twins responded, “I never told people I was a twin and it made my sister very mad.” Some positive responses included, “my sister loved being a twin though. She loved the attention and had a special wave and everything.” Another response included, “I had a blast. From what I remember I loved it. I enjoyed sharing a room until I was sixteen. She turned into a pig. We would get in hair fights and she’d lend my clothes to her friends.” There were also perks to being a twin such as: “when corduroys were in, we each bought five different colors and we would share.” Lastly an important comment the researchers believe to be a common theme amongst twins was found in this comment, “I think one big thing is that because you have each other I think you get more freedom and responsibility sooner. For example: walking to the corner store to get milk or two of you doing chores instead of one.” She also stated that she considered her childhood as good growing up as a twin, “I think for the most part it was good to always have someone there with you. I don’t think growing up was that different being a twin. We didn’t know anything else.”

Within parental relationships there is always a parent the child feels closer to. This was also evidenced by the twin’s therefore highlighting a common theme that twins are individuals and do develop their own identities. One response was, “I feel closer to
my dad than my twin. I spent several days in the hospital after we were born and he would come visit me while my mom was at home with my sister.” This was a relationship and closeness that has continued to this day. An important theme that arose for success in the twin-ship dynamic was, “my parents are the most amazing parents because even when we fought they never took a side.” However, the comparing was almost an innate phenomenon that occurred for those that knew or were related to the twin’s. This can be evidenced by many responses such as: “my parents did go along with the comparing who’s bigger, taller, etc. it wasn’t until I spoke out that they realized it wasn’t okay.” And, “parents tried to treat us the same. They would get us the same gifts but different styles.” And within the gift giving, if the twin’s weren’t given the same gifts it ultimately result in one twin feeling more special found in this statement, “my mom gave me a silver dollar and a bracelet and I thought I was more special.” And, “Dad was always giving me little toys. He gave me a kaleidoscope.”

Being a twin in the educational process can be a protective factor and a barrier towards achieving individuality. This statement can be supported by these responses, “we had separate classrooms. It was funny because it was very competitive.” And, “I cried. But in college we carpooled and took classes together.” Another twin stated, “It was traumatizing,” when asked how being in separate classes made her feel. A common theme amongst the twins was the twins were always separated starting in kindergarten. One set of twins in particular felt that being separated all throughout their educational journey was traumatizing and frequently used this term to describe that experience. For example, “in high school we had separate lunch time and that was traumatizing.”
Competitiveness is not always something that was pointed out by others outside the twin-ship but conveyed within the twin-ship as well. This can be highlighted with these responses, “we were maybe more competitive when we were younger. I used to say that my sister was maybe an opportunist and it was all about her. And now I see that that was my inferiority to her.” And, “I felt like we were different, not socially. Maybe a little bit now. My sister is a good writer.” Also, “we are competitive artistically. We would each paint or draw when we were little and our Dad would always pick the best one. Someone would be a winner and someone would be a loser.” This example can increase competition within the twin dynamic. One twin stated that, “I did not feel competitive socially. I did, however, when we got to our coed high school I started to get my own friends. I really think that I always gave my sister the security she needed. I think I always tried to fit in with the cool crowd growing up even though I didn’t really belong. She chose the safe friends that were easy to befriend- (the awkward kids like us).”

The researchers specifically targeted how the twins perceived individuality and if they thought they were similar or different to their twin. One twin stated, “With the mirror image you know what I tell people- it’s like being married without picking your spouse.” Another twin stated, “Yes. We are different. Retaliation for me was the best part of being a twin.” One set of twins are profoundly close as conveyed in this response, “I’ve always been told by the guys I’ve dated that I’m weird in the way that I am because I get all my needs met with her. We are best friends.” The researchers would like to mention that this set of twins still live together and share a profoundly close bond compared to the other twins included in this study. This was a valuable piece of evidence
to highlight the twins perception of being different, “she would put her muddy rain boots on the counter. She’s like my mom and I pride myself on being like my Dad. You know what’s interesting is that my sister had more power. Maybe it is because she older. Why does she get to be the leader? I’m kind of the taking the lead on things now. I feel empowered.” This statement made by one of interviewees is poignant in the theme of discussing individuality in that she stated, “we are similar in a lot of ways, but very different at the same time. I think this has a lot to do with life experience and opportunity but also the choices we have made.”

The researchers then moved onto targeting the friendship of the twins and what they thought about their relationship with one another while growing up and if it was ever thought about it at all. Among the six twin interviewed, two of the sets felt that they were very different from each other while growing up. One twin that felt they were not growing up stated, “We weren’t really friends. We were sisters. We were always together. Until our sophomore year we shared a room with each other or we would flip flop with our little sister.” Another twin sister that felt that she was not close with her twin stated, “She saw it totally different. I didn’t even know it until I was thirty that she was hurt by it (About me not liking being a twin). And then I really wanted to nurture her and our relationship. She is really concerned with what people think about her.” As referenced above one set of twins we interviewed have been very close. These twins consider themselves to be best friends and always have. They revealed during the interview that a childhood friend of theirs “would always get mad because we’d always get all the attention.” One twin elaborated greatly on this question and stated, “I think it
would be weird if your twin was not your best friend…but how do you interpret best friend. She has been with me my entire life. I am her world and she is mine…but that has a lot to do with tolerance and biting my tongue. She has sacrificed a lot in our lives to protect me and because of this I am outgoing and strong. I owed that to her. Without her I would not have felt unstoppable.”

When asking the twins how they felt about being different from their non-twin sibling while growing up, presented a bit of a challenge in that not too much information was solicited. This question was not discussed as thoroughly as the researchers had hoped. One twin stated, “Our younger sister is spoiled rotten. No she did not feel left out. We never got to go places as a pair. Our friends’ parents wouldn’t invite us because we came as a duo.” This same twin also stated that, “my brother is the favorite by my mom. My brother gets the most exceptions because of his job from my mom.” Another twin stated that her mom thought, “We were very different.” This individual also stated that, “I am definitely closer with my brother. My sister and I have a very different opinion about our brother from one another. He comes up and stays in the ‘love shack’ with his boys and goes fishing and stuff. We spend a lot of time together.” Some of the questions overlapped in topic and were addressed within separate questions.

**Parental Influence**

When the researchers addressed the parental dynamics of the family the twins solicited information that may be useful for future twins of parents. This information was shared by a twin, whose father was educated on the relationship component of being a twin. This twin shared, “My dad was a psychologist so I think he was always aware of
the twin dynamic and I think they did what was typical with same gifts, different colors and I think they were even, but I don’t think this was because we were twins. I think they tried to make everyone’s gift equal. They didn’t treat us different so we didn’t feel different in that way.” It is important for parents of twins to support fairness but to nurture the opportunities to gain individuality.

**Adulthood Perception**

In the last section addressed regarding the strengths and weaknesses of the twin relationship. It was revealed that that, “I think once we became friends we started to support each other. We hate when one of us is upset. We are very different in our independence. We are usually stressed out and emotional on the same days. It makes me happy when we get to see each other regularly. We understand each other.” A set of twins we interviewed were in the process of mending a recent falling out and this is what was said, “I love her. And with time I look forward to growing old with her. I know we will have our ups and downs. We are on the mend but in the end we will endure.” The other twin in this twinship shared regarding their falling out that, “I am hoping it is going to be strong again. She is my best friend.” Another twin shared, “She is the greatest thing since sliced bread. One thing I would have changed while growing up would be maybe having our own rooms and friends. Our bond is very strong and for twins it’s very strong.” The other twin of this twinship added, “She is the coolest chick.” A recently married twin shared, “I relish in being weird with her. I told my husband when we started dating that my sister is a huge part of my life.”
Summary

The data gathered from six MZ twins interviewed for this project offers the following information: 1) the twin perception regarding individuality and its importance for success in adulthood, 2) their opinions regarding the importance of their relationship with one another, 3) competitive factors twins feel, 4) the struggles and successes of being a twin and lastly 5) the parental influence parents can have on the twinship and whether that nurtures or hinders individuality. The intent of this research study was to gather information regarding a twin’s quest towards individuality. The information solicited in this project objectively cited twins’ experiences and opinions on growing up as a twin.
Chapter 5

Summary

This chapter will discuss the idea of MZ twins gaining individuality. Within the context of individuality, this chapter will also explore the diversity and practice considerations with twin siblings through personal interviews and experiences. In addition to the exploration of the twin dynamic, this chapter will also summarize implications for future social work practice and ideas for future research. In today’s world and with the advancement of fertility treatments, the prevalence of twin’s is increasing. With that, the uniqueness of the twin relationship must be taken into consideration when people interact with a set of twins. A twinship is a connection that people are often fascinated by and for good intentions. The closeness of a twinship is also something that is not objectively identifiable to the twin but is experienced with a doubt and is often times hard for a twin to describe.

Research on twins is significantly more relevant and valuable when actually conducted by a twin. The researchers whom conducted this study are MZ twins themselves. Within their twinship they were able to identify with the subjects interviewed for this research project and bring forward meaningful understanding into this area of study. The findings that were identified from this research strongly correlate with the experiences the researchers have felt throughout their life course. The compilation of the literature review combined with the personal interviews from MZ twins, adds to the relevance and conclusions presented in this study.
One of the major findings from this study was that the connection within a twin relationship and how it is unlike any other human relationship. The closeness is profound yet challenged at times but even within those times of struggle there is an unwavering connection. During each interview, the researchers felt the emotion from each twin as they described their relationship with their twin siblings. It seemed difficult for each twin interviewed to imagine their life without their twin. In the literature, twin bereavement and loss was an area of focus. Woodward (2010) conducted a quantitative study which led her to better understand that the loss of a twin has a very serious impact on the surviving twin. Within this author's findings it was found that twins whom experienced the loss of their twin were forever feeling a deep loss and its effect on sense of self or identity and often felt a void. Some of the twins used in Woodward’s study lost their twin at birth yet still felt a tremendous feeling of loneliness throughout the course of their lives. Woodward felt compelled to conduct this study due to her own personal experience towards healing after the loss of her own twin. ‘The Lone Twin Network’ is a support group designed for twins whom have lost their twin and it is also where she found her subjects.

The researchers felt that after the interviews were completed, combined with the literature, that it is not the twin relationship that restricts the outcome of individuality but the relationships outside the twinship. Societal norms about twins also play a key role in the formation of individuality. People by nature treat twins as one person based on appearance and sometimes discount the beauty of the individual. The researchers whom conducted this study were raised by a Licensed Clinical Social Worker who embraced
individuality and reared her twins with this notion from the time they were born. It was accounted for during the interviews that the twin subjects were often dressed the same, shared rooms, and called twinney instead of by their names. It was also identified that the twins in the study were compared to their twin sibling to see who was smarter, taller, better at art, better at sports, etc. which by nature increases competitiveness. The researchers believe that constant comparisons increase an internal insecurity which may lead to the twin feeling inadequate. This struggle can manifest itself in a way that can cause resentment later in life.

As an identical twin and embarking on this research project with my twin sister, I had many expectations. For one, I knew this would be a memorable experience to participate in with my twin sister and for two, I knew I could count on her to deliver the perseverance and commitment needed to complete such a large and tedious task. Since the topic of gaining individuality for identical twins is so personal to my life, the topic itself stirred up a lot of excitement for me and even more so knowing that we would be able to investigate the relationships of other twins together. This is a journey that not many twins have the opportunity to do. People have said that co-authoring a thesis on individuality among identical twins with my twin sister is not very individualistic. And in that statement, there is some truth but it also has provided us the opportunity to explore our own relationship and objectively see ourselves individually. While interviewing other twins and hearing them discuss their bond with their twin sister, a lot of emotion arose in each of us. I cannot really describe what we each were feeling but I can say that I felt very privileged and lucky to have my twin sister. I feel like being part of a twinship is
perhaps the coolest and most unexplainable phenomenon to be part of. Is it something that people are not only fascinated by but often share that they wish they had a twin. Within the research, authors have stated that a twinship is loaded with psychological hazards in that they may produce disturbances in establishing an individual identity.

Research also suggests that as a twin unit breaks off into adulthood emotional difficulties can occur when twins branch off toward psychological differentiation. During our study I saw that this circumstance occurred for two sets of the twins that were interviewed. Within the twinships, very emotional circumstances occurred in their lives which caused them to grow tremendously as individuals and ultimately achieve an identity solely as one part of a set. Now among these emotional experiences which these two sets of twins endured ultimately strengthened the bond and ‘ultimate closeness’ of the twinship. For me, the psychological differentiation occurred during this process. All the interviews were conducted with my twin sister and I present. It was interesting to witness each of our reactions to the topic of competitiveness. I can honestly say that I never felt competitive with my sister but she did. I was somewhat disturbed and concerned for the effect I had on her and felt very sad that she felt this way. There is no bone in my body that feels that I am above her, in intelligence or beauty and in these feelings I have found that I’ve always thought she was above me. This has been a fascinating journey for me to experience this with my sister and has opened my eyes in a way that sees her as an individual and not just my twin. We have struggled with our emotions during this process and there were four months where we hardly spoke to each other. We, for the first time in our lives did not spend Thanksgiving or Christmas together, which I feel in large has
been because of the realizations we were each perceiving about our twinship during that time. In the end, and looking back on that turbulent time, I hold my sister at higher standard than I ever have and appreciate her on a much deeper level than I ever have. We have grown apart as individuals and grown even stronger in our twinship than I could have ever imagined. Writing this thesis with her has been the best decision for me and for our individuality. Thank you Janae for being my twin, my best friend and the best research partner a person could ever ask for. I love you!

As the other twin of this duo, I would like to share my perception of this project. I too had many expectations coming into this grueling task of a thesis. I knew when my sister and I decided to partner up and explore individuality amongst twins that I had made the right choice and realized this is the biggest and most meaningful project of my academic career. Growing up as an identical twin has been such an incredible and sometimes very challenging journey. I have learned through this process that the bond of a twin is like no other bond in the world. The love and connection we have for each other is indescribable. As we began this quest towards twins gaining their own individuality I discovered so much about myself and my sister. As Jilianne mentioned above, this year was the first time in our lives that we did not spend Thanksgiving or Christmas together and from this we have grown a lot. We finally stood up for what is important to us individually and discovered our own identities separate from each other. We have also taken many classes together in the course of our college careers and working on this thesis has changed that as well. I believe we have become more of an individual this year
while working on this project and our relationship and friendship is stronger than it has ever been.

There have been times in my life where I have felt different levels of competitiveness with my sister. I learned while interviewing other twins that this was a common feeling among several of them. I have later found that my sister never felt this way. I believe I felt this way because I looked up to her and always thought she was so smart, so stylish and people loved her. I realized later that we both had individual qualities that were very different from each other but equal in importance and the competitiveness dissipated. I love her attention to the little details and her total thoughtfulness and how much of her work comes straight from her heart. There was such a connection with all the twins that we interviewed and it stirred up many emotions personally. Jilianne and I shared so many common themes and childhood experiences with the twins interviewed that we could have gone on for hours talking about all the similar experiences we all went through. This has been the most significant part of my academic career and I am so happy to share this with my best friend and someone I hold on the highest pedestal. I love you, Jilianne thank you for your dedication and perseverance through this demanding project, I can’t imagine working on this thesis with anybody else.

Social Work Implications

It would be of great importance for social workers working in the Child Protective Services or other non-profits which focus on the fostering and adoption of children to consider keeping twins together. In the research, it was found that twins who are
separated or lose their twin sibling feel a void in their lives and suffer psychological
effects as a result. Children in foster care already experience an emotional hardship and
the researchers believe that the effects of separating twins can intensify the struggle
which a twin may never recover from. Child welfare policy suggests keeping siblings
who are close in age together. “Approximately 70 percent of children in foster care in the
United States have another sibling also in care. For a variety of reasons many of these
sibling groups are not placed together” (www.childwelfare.gov, 2006). Among the policy
regarding child welfare and keeping the union of a twinship together, there is not any
specific language regarding such an issue. Within the definition of siblings, there are
informal definitions which families may use to describe a family but that may be different
than what case workers use and/or legislative definitions. However twins, by nature of
sharing DNA and birthdates will meet every definition of a sibling whether it is an
informal or legislative definition. In the context of policy regarding siblings it can be very
beneficial for twins to remain together and to keep that relationship intact. This should
also be in place when twins are up for adoption. Research suggests that twins whom are
separated at birth feel a void and a sense of loss over the separation from their twin.
Woodward (2010) researched the effects of separation among twins and loss of a twin
sibling and both can be very harmful to a twin’s overall well being and development.

**Recommendation for Future Research**

The researchers believe that this project has provided valuable insight into social
workers perceptions and knowledge regarding the issue of twins gaining individuality.
The researchers also believe that parents, siblings, and family may also benefit from this
project. However, the researchers would like to offer the following suggestions that may improve the study recently completed.

With a sample size of six MZ twins, one can consider this sample too small and not representative of all twinships. One may also consider this study too narrow in that only females were interviewed and no males. Utilizing questionnaires that could be mailed to MZ twins in a variety of settings rather than conducting personal interviews has the potential to increase the sample size and provide a better representation of diverse positions on this issue. The twins interviewed in this study, in their own words, stated that individuality was never an issue of concern nor was it heavily influenced to be important. Acknowledging this information the researchers believe that including all factors that affect a twinship such as: twins separated at birth, placed in separate foster homes, adoption and twins who have lost a twin would increase the value of this study.

Lastly, the researchers believe that data collection from parents and family members of twins may also be beneficial in promoting individuality. Additionally, it would be valuable to include language in child welfare policy that specifically regards the importance of the twin union. Also, with the ever changing advancements regarding fertility treatments, the number of twins has vastly increased. With this it would be useful to see current trends of twin births in the United States and worldwide. The researchers would like to see more research conducted on the twin dynamic regarding individuality.

**Overall Summary**

While working on this research project with another person I learned some important things about myself. I learned that compromise and leaving room for differing
opinions is very important. The good attributes of working on such a demanding project are that as an author, operating in a co-authorship, there is someone to bounce ideas off, and it was refreshing to have a sounding board to remain creative and interested in the topic. Having a co-author allowed the material to remain interesting and free of stagnation. This topic in itself was very interesting to me and I found myself being frequently re-energized each time my co-researcher and I met to work on this project. As far as what this project did for me that caused stress and turmoil, was that I have a Type A personality and I function in a very thorough way. When I have an assignment or objective to focus on I work hard to finish and find whatever available time I have to complete the task in a timely manner. Working with someone else was not so instantaneous for me and patience was an important factor to practice during this process. Practicing patience was very important as well as allowing for flexibility in time and progress. On a positive note however, my co-researcher, regardless of being my twin, is a very driven individual who encompasses all the positive qualities of a motivated and committed student with an attitude apt for learning. As twins our personal struggles as addressed earlier, do not negate the fact that this journey has been filled with gratitude for one another nor for the work that we produced.

As an individual working on this thesis with a partner, I have learned so much about myself. I have learned that working on such a demanding and time consuming task that it is wonderful to work on it with a partner. Each chapter of this thesis was challenging but with someone else, to collaborate with, and share ideas made the task not seem so daunting. I believe that after the amount of time and stress we put into this
project that we can do anything. Patience is something that I have always struggled because I like to finish things quickly. During this process, I have strengthened some of my skills and patience and teamwork were amongst the top two. My co-author was amazing to work with as we have similar driven minds that like to get things done. I have learned that I really enjoy doing research especially when it is on a topic of my choice. Libraries now hold a completely new meaning to me since I have spent many Saturday mornings there typing away with my partner. Working on this thesis has been exciting, stressful, and frustrating all mixed into one emotion. I am filled with a completely new sense of pride completing this project. I appreciate my partner, my twin, on an entire new level. We as twins are unstoppable.
APPENDIX A

INTERVIEW QUESTIONNAIRE PROTOCOL
APPENDIX

Interview Questionnaire Protocol

Demographics

1. How old are you? __________/year-old

2. What is your ethnic background? __________/National origin

3. What is your gender? ___ Female _____Male

Childhood

4. How was your childhood growing up as a twin? Explain.

5. How did your parents treat you as twins? The same or different?

6. How was school as a twin? Did you take classes together?

7. Did you ever think that you were alone in school even though you had your twin with you along the journey?

8. Did you ever feel competitive towards your twin socially or academically?

9. When it comes to twins, how do you interpret individuality? Do you think you and your twin are different?

10. Did you ever view your twin sibling as your best friend while growing up? Was the friendship assumed or was it something that none of you ever thought about?

11. How did you feel about ‘being different’ from your non-twin siblings while growing up?

12. Describe a moment that you are most proud of because of a difference.

12. How was your relationship with other siblings in the house, if you had any?

13. If you have other non-twin siblings, did you feel more favorable or less favorable?

14. In case you feel less favorable by your siblings, please describe.
Parents
15. Based on your opinion, how did your parents treat you as twins? Did they treat both of you the same or different?

16. Do you think your parents struggled with the twin dynamic that was established between you and your twin? Such as: making everything even, gifts that were the same but different colors or designs. If so, how do you think this either hindered or promoted your individuality?

17. If there were siblings in your family, how did you feel they thought of you in relation to the family dynamic? Why or why not?

Adulthood
19. Tell me about how you feel about your twin sibling?

20. Is the relationship you have with your twin strong or weak?
   If it is strong, explain _______________________
   If it is weak, explain _______________________

21. Tell me about your interests? Do you think they are similar?
   Please provide several examples that you and your twin have that are similar: __________________________________________________________

   Please provide several examples that you and your twin have that are not of similar interest: _________________________________________________________________

22. Overall, how is the bond between you and your twin? Would you say…?
   a. Not very strong
   b. Somewhat strong
   c. Strong
   d. Very strong

23. What do you think could have been different during your upbringing that could have either hindered or restricted individuality between you or your twin?

24. As far as you could remember, when it comes to relationship between you and your twin, would you change anything at all?
   If yes, please explain _______________________
   If no, please explain __________________________
25. Do you know anything about the social work profession? If yes, could you explain how the social work profession could intervene when it comes to relationship between twins?

Thanks for your time. Would you like to add anything that we did not ask?
APPENDIX B

CONSENT TO PARTICIPATE IN RESEARCH
Consent to Participate in Research

You are being asked to participate in a research study being conducted by Janae Conley and Jilianne Conley, graduate students in the Division of Social Work at California State University, Sacramento. The study will examine the perceptions of individuality among monozygotic (MZ) twins during their upbringing from childhood through adulthood.

If you are willing to participate in the research study, you will be asked to complete a questionnaire in which the researchers will facilitate in the course of an interview. The questionnaire will contain (25) questions including background information such as age, gender, race, your perceptions of individuality and suggestions to parents of twins as well as gain information to alleviate the fallacy of all twins being exactly the same. Either before completing the questionnaire or during the process of completing it, you have the right to refuse answering any question, discontinue or decline further participation at any time.

During this study you may not benefit personally from your participation. However, the results attained from this study will be very beneficial in challenging the stigma society has as a whole on twins. Specifically, this study is to give the ‘individual’ twin a voice and strengthen the hypothesis of twins not being the same. We want to assure that the final product will only contain aggregate information shared by you and any other twin participants. There will be no identifying information such as your name or place of employment used for the purpose of this study in any way shape or form.

Your participation in this study will remain completely confidential. The questionnaires will only be viewed by the two researchers of the study and their project advisor, Dr. Serge Lee (916) 278-5820. Information obtained will be kept in a locked file cabinet and only accessible to the researchers. Once consented, the consent form will be kept in a separate location then the questionnaire to ensure protection of your identity. Once the information from the questionnaires has been recorded in a computer software program, all information obtained (questionnaire and consent form) will be shredded. The researchers will also use a recording device as a part of the recording mechanism. Once the information is transcribed, the information on the recording device will be erased.

We greatly appreciate your participation in this study but unfortunately we cannot provide any compensation for your participation. However, the knowledge and experience you share will become most valuable to evidence-based literature and social work practices.

After participating in the research project and if you are interested in the results of the study and/or have any questions you can contact the researchers, Janae Conley by email at janaeconley@yahoo.com or by phone at (916) 532-0021 and/or Jilianne Conley by email at jilianneconley@yahoo.com or by phone at (530) 401-2806 for information after May 19, 2011.

Your signature below indicates that you have read this page and have agreed to participate in the research study.
Signature of Participant

Date

Hope Counseling Center
www.hope-counselingcenter.org
720 Sunrise Ave  2633 24th Street
Roseville, Ca 95661  Sacramento, Ca 95818
(916) 780-1059  (916) 444-2170

CSUS Center for Counseling and Diagnostic Services
Eureka Hall
6000 J Street
Sacramento, Ca 95819
(916) 278-6252

The Effort -J Street Community Health Center
www.theeffort.org
1820 J Street
Sacramento, CA 95811
(916) 737-5555
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http://search.ebscohost.com


http://search.ebscohost.com


